

¹³26. (NEW) The computer-readable storage medium as claimed in claim ¹²6, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

¹⁵27. (NEW) The computer-readable storage medium as claimed in claim ¹⁴7, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

¹⁷28. (NEW) The image generating apparatus as claimed in claim ¹⁶8, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

²⁸29. (NEW) The image generating method as claimed in claim ²⁵15, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

³⁰30. (NEW) The image generating apparatus as claimed in claim ²⁹17, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

REMARKS

STATUS OF CLAIMS

Claims 1-17 were pending and stood rejected.

By this Amendment claims 1-8, and 15-17 are amended and new claims 18-30 are added. Therefore, claims 1-30 are now pending and under consideration.

CORRECTED FORMAL DRAWINGS

On Office Action Summary page, item 11, corrected drawings were required.

A separate Letter to the Examiner Submitting Corrected Formal Drawings is enclosed herewith, submitting one sheet (drawing FIG. 1). Entry of the corrected formal drawings (FIG. 1) is requested.

REJECTION UNDER 35 U.S.C. §102(e)

On Office Action page 2, item 2, claims 1-17 were rejected under 35 U.S.C. §102(e) as being anticipated by Kaneko (U.S. Patent No. 6,167,562). Reconsideration of the rejection is respectfully requested.

CLAIMS 1-8, 15-17

The Examiner asserted, in the Office Action at page 3, item 3, that "Kaneko teaches "combining the image data of the multiple characters" in order to generate (sic) and display (sic) the motion character to the user (col. 11, lines 41-48 [of Kaneko]) ... [and] Kaneko does teach a sequential (series) of actions at col. 11, lines 32-58 [of Kaneko]." (Bracketed inserts are added.)

Applicants respectfully disagree with the Examiners assertion and request the Examiner review Applicants' disclosure described on page 17, lines 9-21 of the specification relating to prior art basically corresponding to the apparatus and method of Kaneko. Further, as argued in the previously Amendment filed March 12, 2002, in Kaneko, each of the individual images does not represent a series of actions, and only represents a portion of the action. Thus, to guarantee that an intended (or desired) action will be represented correctly in advance is not possible, even if each of the individual images is connected. As a result, Kaneko requires a debugging process to confirm whether or not the intended action is visible to the viewer when the individual images are connected.

More specifically, in the Kaneko apparatus, "[t]he image information comprises the image information A of ... files aggregate of the image data relating to a variety of the characters including mainly e.g. persons or animals and the image information B of ... files aggregate of the image data relating to the background picture." (See Kaneko at column 10, line 63 to column 11, line 1.) "The image information A is stored under the control of the image number identifying the image data acting as an element of the characters..., for example, "data 1, data 2, . . . data n", are managed in correspondence with the respective image numbers "G1, G2, . . . Gn" of the image number field 43a." (See Kaneko at column 11, lines 31-40.) Further, "as shown in FIG. 6, the animation image information having the animation number "A2" is comprised of five pieces of the character image data having image numbers "G9, G15, G21, G1, and "G19".

Thus, in the Kaneko apparatus the image information A is made up of data (image information) having image numbers G1-Gn, as shown in Fig. 7, and each of animation image information having animation numbers A1, A2, A3 ... is made up of a plurality of data (i.e., image information A) having the corresponding image numbers G1-Gn. Thus, the animation image information, for example, having the image number A1 is made up of the plurality of data (image information) having the corresponding image numbers G1-G22, as shown in Fig. 6.

Accordingly, the Kaneko apparatus forms a motion image by combining the plurality of animation image information having the corresponding animation numbers. (See Kaneko at column 11, lines 59 to column 12, line 14.) Further, "[a] unit of the multiple image data to be managed by ... one animation number is referred to as an image-drawing unit." (See Kaneko at column 11, lines 52-54 and Fig. 6.)

However, although each image-drawing unit is managed by one animation number, each image-drawing unit is not defined and guaranteed in advance to indicate one communication information to a viewer. The operator must select and connect the image-drawing units to form a motion image based on experience. For this reason, after the image-drawing units are combined to form the motion image, Kaneko requires a debugging process to confirm whether or not the series of actions in the motion image are unnatural, and to confirm whether or not the intended scenario (action) is visible to the viewer when the image-drawing units (individual images) are connected.

According to the present invention, the series of actions is formed as a component, and the components are stored, with each component being defined and guaranteed in advance to indicate one communication information to a viewer. Thus, when creating or editing the action image, the stored component images are read and connected. Since the series of actions is formed in advance as the component image, it is unnecessary to confirm whether or not the action indicated by the component image appears unnatural. That is, unlike Kaneko, the present invention does not require a debugging process to confirm whether or not the series of actions are unnatural and whether or not the intended action is visible to the viewer who views the series of actions indicated by the component image. (See the present specification at page 17, lines 22-34.)

According to the recitation in claim 1 "a sequential character image [is generated] by connecting a plurality of unit image groups, which are respectively defined and guaranteed in advance to indicate one communication information to a viewer."

Kaneko does not disclose or suggest anything related to the unit image groups being respectively defined and guaranteed in advance to indicate one communication information to the viewer.

Accordingly, claim 1 patentably distinguishes over the cited prior art for at least the above-mentioned reasons and should be allowable. Independent claims 3-8, 15 and 17, which include a recitation similar to the above-mentioned recitation in claim 1, should also be allowable. Claims 2, and 16, which depend from claims 1 and 15 should be allowable for at least the same reasons as claims 1 and 15, as well as for the additional recitations therein. Reconsideration of the rejection is respectfully requested.

CLAIMS 9-14

Applicants traverse the rejection of claims 9-14 based on the remarks below.

Independent claim 9 is directed to an image generating apparatus in which "sequence generating means ... treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs" and further that "each of said significance spaces being defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output." However, Kaneko does not disclose or suggest at least the generation of an operation sequence using the above-mentioned significance spaces.

Kaneko discloses nothing related to the significant space which is defined as "an object ... including both a method corresponding to a character display and a method corresponding to a user input and/or output" (as recited in claim 9).

This means, for example, that a significant space includes two methods, a character display method cooperating with a user input and/or output method. In particular, the significant space, for example, includes methods 711, 712, 713 and 714 corresponding to a character display, to an audio reproduction, to a cooperation process between the character display and

the audio reproduction and to a user input/output, respectively. (See specification at page 38, lines 10-20 and Fig 22.)

The Examiner asserted, in the Office Action at page 2, item 2, that "Kaneko further fully (sic) teaches various data processing steps for generating a displaying a motion picture on a computer screen ..."

Applicants respectfully disagree with the Examiner, as the cited reference to Kaneko suggests nothing related to a significant space including methods such as methods 711, 712, 713 and 714.

Accordingly, neither Kaneko nor any other cited art either taken alone or in combination discloses or suggests at least the above-mentioned recitation of claim 9, which at least includes the generation of an operation sequence using the significance spaces and which produces the beneficial result of easily creating and editing the operation sequence (see specification at page 9, lines 3-4), for example, of an ATM machine.

Therefore, claim 9 directed to a generating apparatus patentably distinguishes over the cited prior art for at least the above-mentioned reasons and should be allowable.

Independent claim 11 directed to a computer-readable storage medium recites "sequence generating means for causing the computer to generate an operation sequence by connecting a plurality of picture scenes of a character image, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs," and should also be allowable. Further, independent claim 13 directed to a database recites "a character image stored in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs, and each of said significance spaces is defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output," and should also be allowable.

Claims 10, 12 and 14, which depend directly from claims 9, 11 and 13, should be allowable for at least the same reasons as claims 9, 11 and 13, as well as for the additional recitations therein. Reconsideration of the rejection is respectfully requested.

NEW CLAIMS 18-30

New claims 18-30 were added to afford a varying scope of protection.

New claims 18-30 depend directly from claims 1, 3-9, 15 and 17 and should be allowable for at least the same reasons as claims 1, 3-9, 15 and 17, as well as for the additional recitations therein. For example, dependent claims 22-30 include the recitation of "wherein at least one of the plurality of unit image groups having a respective starting image substantially identical to a respective trailing image," which allows the amount of image data to be stored to be minimized and to easily connect images. (See, for example, the present specification at page 34, lines 19- 32.)

Kaneko discloses an apparatus for creating an animation program, which includes "animation management means for managing said entered image information by creating an animation program in an image-drawing unit of drawing an image by sorting said multiple pieces of said entered image information in a time series." (See Kaneko at column 2, line 67 to column 3, line 4.)

However, Kaneko is silent with regard to the recitation in claims 22-30 of "wherein at least one of the plurality of unit image groups having a respective starting image substantially identical to a respective trailing image." Thus, Kaneko does not disclose or suggest that at least one image group has a starting and a trailing image which are substantially identical.

Accordingly, it is submitted that dependent claims recite additional patentably distinguishing features and should be allowable independent of claims from which they depend.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 10/3/02

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-8 and 15-17 have been amended and new claims 18-30 have been added. The remaining pending claims are provided below in their entirety for the convenience of the Examiner.

1. (TWICE AMENDED) An image generating apparatus comprising:
image generating means for generating a sequential character image by connecting a plurality of unit image groups, which are respectively defined and guaranteed in advance to indicate one communication information to a viewer; and
display means for displaying said sequential character image.
2. (TWICE AMENDED) The image generating apparatus as claimed in claim 1, which further comprises:
storage means for storing a plurality of said unit image groups,
said storage means storing a plurality of kinds of unit image groups having mutually different starting reference images and ending reference images with respect to a same communication information, and
said image generating means reading a leading unit image group and a trailing image group which has a starting reference image approximately matching an ending reference image of the leading unit image group from said storage means and connecting the leading and trailing unit image groups.
3. (TWICE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a sequential character image, comprising:
image generating means for causing the computer to generate a sequential character image by connecting a plurality of unit image groups which are respectively defined in advance and guaranteed to indicate one communication information to a viewer; and
display means for causing the computer to display said sequential character image.

4. (TWICE AMENDED) An image generating apparatus which generates a motion picture, comprising:

a database storing unit component images respectively representing a series of actions, each of said unit component images being defined and guaranteed in advance to indicate one communication information to a viewer and being made up of a plurality of images including a starting image and an ending image of an action of a character;

a data retrieving part selectively searching and reading the unit component images stored in said database; and

a connecting part connecting an end image of a first unit component image read by said data retrieving part and a starting image of a second unit component image read by said data retrieving part.

5. (TWICE AMENDED) An image generating apparatus for generating a motion picture, comprising:

a database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed in advance to indicate one communication information to a viewer;

a retrieving part reading a unit image group corresponding to input attribute information from said database, based on the input attribute information; and

editing means for editing the unit image group read by said retrieving part.

6. (TWICE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a motion picture, comprising:

a data retrieving part causing the computer to selectively search and read unit component images stored in a database which stores unit component images respectively representing a series of actions, each of said unit component images being defined and guaranteed in advance to indicate one communication information to a viewer and being made up of a plurality of images including a starting image and an ending image of an action of a character; and

a connecting part causing the computer to connect an end image of a first unit component image which is caused to read by said data retrieving part and a starting image of a second unit component image which is caused to read by said data retrieving part.

7. (TWICE AMENDED) A computer-readable storage medium which stores a program for causing a computer to generate a motion picture, comprising:

a retrieving part causing the computer to read a unit image group corresponding to input attribute information from a database, based on the input attribute information, said database storing unit image groups respectively representing an action of a character and made up of a plurality of images, in correspondence with attribute information defining each action, each of said unit image groups being defined and guaranteed in advance to indicate one communication information to a viewer; and

editing means for causing the computer to edit the unit image group caused to read by said retrieving part.

8. (TWICE AMENDED) An image generating apparatus comprising:

image generating means for generating a sequential character image by connecting a plurality of unit image groups which are respectively defined and guaranteed in advance to indicate one communication information to a viewer;

display means for displaying the sequential character image; and

control means for controlling a device depending on a motion of the sequential character image.

9. (AS ONCE AMENDED) An image generating apparatus comprising:

sequence generating means for generating an operation sequence by connecting a plurality of picture scenes of a character image generated by said image generating apparatus, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs,

each of said significance spaces being defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

10. (AS UNAMENDED) The image generating apparatus as claimed in claim 9, wherein said sequence generating means includes means for calling a corresponding data file by searching a database based on a retrieval key specified by each method.

11. (AS UNAMENDED) A computer-readable storage medium which stores a program for causing a computer to generate an operation sequence, comprising:

sequence generating means for causing the computer to generate an operation sequence by connecting a plurality of picture scenes of a character image, by treating the character image in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs,

each of said significance spaces being defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

12. (AS UNAMENDED) The computer-readable storage medium as claimed in claim 11, wherein each of said significance spaces further includes at least one of a method corresponding to audio reproduction, a method corresponding to a cooperation process of the character display and the audio reproduction, and a method corresponding to a background image.

13. (AS UNAMENDED) A database comprising:

a character image stored in units of significance spaces corresponding to one picture scene from a point in time when a switching of one picture of the character image occurs to a point in time when a next switching of one picture occurs, and each of said significance spaces is defined as an object at least including a method corresponding to a character display and a method corresponding to a user input and/or output.

14. (AS UNAMENDED) The database as claimed in claim 13, wherein an operation sequence is generated by connecting a plurality of picture scenes of the character image, and data files of the character image stored in the database are searched based on retrieval keys specified by each of methods.

15. (ONCE AMENDED) An image generating method to generate a motion picture, comprising:

defining communication information, which guarantees in advance to indicate the communication information to a viewer;

generating a sequential character image by connecting a plurality of unit image groups which, respectively, indicate the communication information to a viewer; and displaying said sequential character image.

16. (ONCE AMENDED) The image generating method as claimed in claim 15, which further comprises:

storing a plurality of said unit image groups,

storing a plurality of kinds of unit image groups having mutually different starting reference images and ending reference images with respect to a same communication information, and

reading a leading unit image group and a trailing image group which has a starting reference image approximately matching an ending reference image of the leading unit image group from said storage means and connecting the leading and trailing unit image groups.

17. (ONCE AMENDED) An image generating apparatus comprising:

an image generator generating a sequential character image by connecting a plurality of unit image groups which, respectively, represent an action and the plurality of unit image groups are guaranteed in advance to indicate one communication information to a viewer; and a display displaying said sequential character image.

18. (NEW) The image generating apparatus as claimed in claim 1, wherein the plurality of said unit image groups are made up of humanoid images.

19. (NEW) The storage medium as claimed in claim 3, wherein the plurality of said unit image groups are made up of humanoid images.

20. (NEW) The image generating apparatus as claimed in claim 9, further comprising:

a cooperation unit to adjust a reproducing time of image data when the reproducing time of the image data and a reproducing time of audio data do not match, such that the adjusted reproducing time of image data matches the reproducing time of audio data.

21. (NEW) The image generating method as claimed in claim 15, further comprising:
adjusting a reproducing time of image data when the reproducing time of the image data
and a reproducing time of audio data do not match, such that the adjusted reproducing time of
image data matches the reproducing time of audio data.

22. (NEW) The image generating apparatus as claimed in claim 1, wherein at least
one of the plurality of unit image groups has a respective starting image substantially identical
to a respective trailing image.

23. (NEW) The computer-readable storage medium as claimed in claim 3, wherein
at least one of the plurality of unit image groups has a respective starting image substantially
identical to a respective trailing image.

24. (NEW) The image generating apparatus as claimed in claim 4, wherein at least
one of the plurality of unit image groups has a respective starting image substantially identical
to a respective trailing image.

25. (NEW) The image generating apparatus as claimed in claim 5, wherein at least
one of the plurality of unit image groups has a respective starting image substantially identical
to a respective trailing image.

26. (NEW) The computer-readable storage medium as claimed in claim 6, wherein
at least one of the plurality of unit image groups has a respective starting image substantially
identical to a respective trailing image.

27. (NEW) The computer-readable storage medium as claimed in claim 7, wherein
at least one of the plurality of unit image groups has a respective starting image substantially
identical to a respective trailing image.

28. (NEW) The image generating apparatus as claimed in claim 8, wherein at least
one of the plurality of unit image groups has a respective starting image substantially identical
to a respective trailing image.

29. (NEW) The image generating method as claimed in claim 15, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.

30. (NEW) The image generating apparatus as claimed in claim 17, wherein at least one of the plurality of unit image groups has a respective starting image substantially identical to a respective trailing image.